EXHIBIT B

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Ripple credits

From Ripple Wiki

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Introduction

Ripple credits, aka XRP or ripples, are the Ripple network's internal, or native, currency.

See also:

- Currency format

XRP protects the network from abuse

XRP protects the network in two ways:

- XRP prevents transactions spam.
- XRP prevents ledger spam.

To prevent the network from being DDOSed by unlimited transactions, the network charges a, normally, negligible fee to distribute a transaction. When the network is under load, such as when it is attacked, this fee rapidly goes up. This rise in fees quickly bankrupts attackers and keeps the network functioning.

The Ripple ledger keeps track of the state of Ripple accounts. To keep the network ledger size manageable, a reserve of XRP is needed to use space in the ledger. Releasing this space release the reserved XRP. Without this reserve, attackers could make the ledger grow until it became unmanageable.

See also:

- Reserves
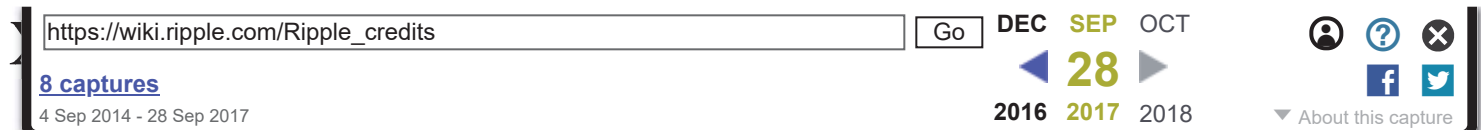
A bridge currency is used as a neutral, trusted currency for parties to transact in when parties don't prefer the same currency. For example, Alice prefers USD and Bob prefers EUR. If they can not find a direct way to convert currencies, they may convert their preferred currency to and from XRP to be able to transact with each other.

Three factors make XRP an ideal bridge currency:

- XRP has low friction.
- XRP has no counter party risk.
- XRP can not be debased.

XRP has low friction as it can be sent directly to any account on the Ripple network with no transfer fees.

XRP is the only currency in the Ripple network that has no counter party risk and can be sent to any account without a trust relationship.

XRP can not be debased. When the Ripple network was created, 100 billion XRP was created. The founders gave 80 billion XRP to the Ripple Labs. Ripple Labs will develop the Ripple software, promote the Ripple payment system, give away XRP, and sell XRP.

XRP funds the development and promotion of the protocol and the network

Ripple Labs sells XRP to fund its operations and promote the network. This allows Ripple Labs to have a spectacularly skilled team to develope and promote the Ripple protocol and network.

See: Ripple Labs Team (https://web.archive.org/web/20170928121624/https://www.ripplelabs.com/team/)

Network transaction fees are destroyed

XRP spent as transaction fees are destroyed. The default transaction fee is currently 10 drops. There should be enough XRP to last for thousands of years despite this destruction. If the value of XRP changes, the transaction fee can be adjusted by the consensus of the network.

The rate of loss of XRP due to losing passwords is thousands of times more significant compared to the amount lost as transaction fees.

Because XRP are divisible, even if only 1 XRP remained, it could be divided up among the users of the network and be enough for the whole world to use.

Summarized

Potential primary uses of XRP:

- Prevent transaction SPAM
  - Fees are destroyed.

- Send at least 20 XRP to create an account.
- Can only send XRP in excessive of reserve.
- Reserve can be used to pay for transactions.
- Vehicle currency
  - Frictionless (no fees).
  - No counterparty (no defaults).
  - No debasement.
- Fund development and promotion of the Ripple protocol and network
  - Ripple Labs ~50 highly skilled employees.

Technical Details

XRP is the proposed ISO 4217 currency code designated for Ripple.

XRP as currently implemented has six digits of precision. The smallest unit is one millionth of an XRP (0.000001) and is called a "drop". That is: 1 XRP = 1,000,000 drops.

Notes on drops

The number 100 billion was chosen for human factors. The precision of drops allows for 5 bits of flags in a 64 bit representation: 1 bit flag to note XRP format, 1 bit to indicate sign, and 3 bits unused.

Most libraries will be considered adequate if they can represent the 100 billion original XRP as drops (100,000,000,000,000,000 drops). This number will fit in a 59 bit unsigned integer.

- `100,000,000,000,000,000 = 10^17 = 10^11 * 10^6`
- `576,460,752,303,423,488 = 2^59`

The JavaScript number format allows exact representation of all integers between −9,007,199,254,740,992 (−2^53) and 9,007,199,254,740,992 (2^53), inclusive. This is inadequate to represent the full range of XRP. Therefore. XRP must be represented in JavaScript using a big number library or string.

Trivia

The name "drops" was first proposed (https://web.archive.org/web/20170928121624/https://ripple.com/forum/viewtopic.php?f=1&t=40&p=228&hilit=drops#p228) by ThePiachu.

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